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ABSTRACT

Television programming has long been recognized as an effective method of educating children. This paper investigated the degree of exposure an educational children's program, Sesame Street, gave to female and male characters and the extent to which these characters were stereotypically portrayed. Children's Television Workshop produces 110 episodes of Sesame Street each year. A random sample of 15 episodes was selected from the pool of episodes aired between November 1992 and May 1993. Teams of observers viewed each episode and recorded the number of characters appearing within each segment. For each character, they recorded gender, whether the character played a primary or secondary role, the presence of stereotypical attributes, and the character's portrayal in a stereotypical role. Results revealed that male characters appeared twice as often as female characters. Furthermore, there was a significantly greater tendency for males to appear in primary roles. Across both genders stereotypical attributes were portrayed five times more frequently than non-stereotypical attributes. The total number of characters portrayed in stereotypical roles was 10 times greater than characters portrayed in non-stereotypical roles. Such stereotypic gender roles may place unnecessary restrictions on a child's ability to investigate and absorb what the world has to offer. Six tables provide statistical summaries. Contains 37 references. (RJM)

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Ratio of Female:Male Characters and Stereotyping in Educational Programming

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Abstract

Television programming has long been recognized as an effective method of educating children. Indeed an entire industry has emerged which develops and markets educational television for children. Of all currently available children's television programs, Sesame Street has been recognized as among the best. This program was used to investigate the degree of exposure children's educational television programming gave to female and male characters and the extent to which these characters were stereotypically portrayed.

A random sample of 15 episodes was viewed by teams of observers. Each episode was comprised of a series of segments. Teams recorded (1) the number of characters appearing within each segment and for each individual character their (2) gender, (3) portrayal in a primary or secondary role, (4) presence of stereotypical attributes, and (5) portrayal in a stereotypical role. Results revealed male characters to appear twice as often as female characters. Furthermore, there was a significantly greater tendency for males to appear in primary roles. Across both genders stereotypical attributes were portrayed five times more frequently than non-stereotypical attributes. The total number of characters portrayed in stereotypical roles was 10 times greater than characters portrayed in non-stereotypical roles.

Ratio of Female:Male Characters and Stereotyping

in Educational Programming

Introduction

Stereotyping is a form of categorization, a way of organizing information by characteristics. The influence of stereotypes on how children can interact and perceive their peers is described in a study by Cann and Palmer (1986). The study involved eight year old male and female subjects whose task was to observe and predict the ability of two children to complete a certain gender specific task. Results revealed an unwillingness on the part of the eight year old subjects to ignore gender stereotypes in the face of specific behavioral expectations during a gender task identification study. For example, if one male child was better than another male child at a male-gender specific task or ability, then the subject believed the superior male would also be better at a second, highly related task or ability. However, if a female child was determined as being better than a male child at a male-gender specific task, she may or may not be believed to be superior at the second, highly related task or ability. The unwillingness to accept "exceptions to the accepted rule" is a frightening and sad testimony to the effects of stereotyping.

Beyond the ability of stereotyping to serve as a descriptive indicator, stereotyping also has the ability to instruct others on what is and is not acceptable behavior. In the words of Unger and Crawford (1992):

> Sex stereotypes have a prescriptive as well as descriptive function. They inform people about what behavior ought to be as much as they tell them what it is...the prescriptive aspect of stereotypes is conveyed primarily by the different attributions people make about others based on their gender. Attributions are assumptions about why people behave in the way that they do. Beliefs about different causality lead to different attributions that stereotypes operate as mechanisms of social control (p. 127).

Wiegman, Kuttschreuter and Baarda (1992) stated "By observing the behavior of others, for instance on television, a notion is formed of how such behavior can be performed, and so it can serve as a symbolic guideline for further action" (p. 148). Television has supported, if not contributed to, gender stereotyping (Bretl & Cantor, 1988; Jeffrey & Durkin, 1989) and to the presentation of extreme gender bias, not only in the creation of stereotypical roles, but also by presenting audiences with a disproportionate number of male roles compared to female roles. Preschoolers have been found to watch an average of four and a half to five hours each day (Gortmaker, Salter, Walker & Dietz, 1990; Pearl, Bouthilet & Lazar, 1982; Singer & Singer, 1981). The images they observe are known to affect their self perception (Kunkel & Murray, 1991; Signorelli, 1989). For example, preschool children have been found to perform more gender stereotypical behaviors the more they view television presenting gender stereotypical roles. Miller and Reeves (1976, 1978) found children tend to choose television characters as people they wanted to emulate when they grow up. And, a study by Kimball (1986) of children's sex role perceptions revealed children's perceptions of sex roles increased following exposure to television.

Various psycho developmental models ascribe the acquisition of gender identity and gender role understanding as occurring during the pre-school years. These include Social Learning Theory (Bandura, 1986; Gerwitz, 1969), Cognitive Developmental Theory (Kohlberg, 1966), and Schema Theory (Martin & Halverson, 1981). Even the most conservative model (Cognitive Development Theory) states gender constancy occurs about age five. It is appropriate to emphasize that preschoolers are the target audience of the television programming investigated in this study.

The children's educational television program Sesame Street is thought by many to represent the pinnacle of children's educational programming. This acclamation is not without foundation for Sesame Street was recently awarded its fifty-first Emmy Award. Certainly, this program is educationally far superior than most other children's programming, and it is for this reason that Sesame Street was chosen as the focus of this study. Sesame

Street is viewed in preschools, kindergartens, daycare centers, and private homes as educational television specifically designed for children. In addition, video taped episodes, books, toys, and audio tapes are available as teaching supplements and educational resources. It would seem reasonable in an age of equal opportunity, that this multi-media approach to children's education would present a balanced portrayal of both sexes.

Purpose

The purpose of this research was to investigate the degree of exposure an educational children's television program, Sesame Street, gave to male and female characters and the extent to which these characters were stereotypically portrayed. Specifically, this research tested the following hypotheses: The educational children's television program Sesame Street (1) presented an equal number of female and male characters; (2) presented an equal number of female and male characters in both primary and secondary roles; (3) did not consistently portray female and male characters with stereotypical attributes; and (4) did not consistently present female and male characters in stereotypical roles.

Methodology

Children's Television Workshop produces 110 episodes of Sesame Street each year. A random sample of 15 episodes was selected from the pool of episodes aired between November 1992 and May 1993 (representing 14 percent of the episodes produced each year). Each episode was comprised of a series of segments each lasting between 7 seconds and 5 minutes 58 seconds. Teams of observers viewed each episode and recorded (1) the number of characters appearing within each segment and for each individual character (2) their gender, (3) portrayal in a primary or secondary role, (4) presence of stereotypical attributes, and (5) portrayal in a stereotypical role.

Observations

Each team of observers was comprised of a time keeper, one female observer, and one male observer. The task of the time keeper was to record the length of each episode segment. Both female and male observers were used in each team to bring the perspective of both sexes to the observation task. A total of eight teams were used in the data collection process. All team members were trained in (1) identifying female and male attributes, (2) identifying stereotypical roles, and (3) differentiating between primary and secondary roles. Discussion within teams was permitted with the timekeeper having the additional task of acting as an arbitrator if the observers could not reach agreement. Each episode was viewed by two separate teams of observers thereby providing cross-validation of results. Discussion between teams was not permitted. If a disparity arose between the observations of two teams regarding any segment, an additional team viewed the segment to arbitrate the final judgment.

Attributes and Stereotypes [1]

The following attributes were classified as female attributes

1. Home oriented
2. Submissive
3. Soft spoken
4. Inactive
5. Pink coloration
6. Emotional
7. Demure/petit
8. Character wears dresses, ruffles and/or lace
9. Long hair
10. Adorned with jewelry
11. Needs security

The following attributes were classified as male attributes

1. Independent
2. Adventurous
3. Aggressive
4. Strong/muscular
5. Active
6. Stoic
7. Blue coloration

[1]Gender attributes and roles were taken from Unger & Crawford (1992); Jeffrey & Durkin, (1989); Picariello, Greenberg, & Pillemer (1990); Hull (1991); Kortenhaus & Demarest (1993).

8. Character wears pants, and/or shirt
9. Short hair
10. Commanding voice
11. No adornment

The following roles were classified as stereotypical female roles

1. Nurse
2. Teacher
3. Model
4. Secretary
5. Dancer
6. Care provider
7. Domestic
8. Waitress
9. Librarian
10. Clerical
11. Victim

The following roles were classified as stereotypical male roles

1. Doctor
2. Firefighter
3. Police officer
4. Business executive
5. Athlete
6. Game show host
7. Trades person
8. Store owner
9. Truck driver
10. Math/science professional
11. Protector

A role was classified as primary if the character playing the role was the most prominent, dominant or starring character. Occasionally some segments contained more than one primary character.

A role was classified as secondary if the role was ancillary. This may include a character appearing briefly in a segment or a character appearing in a supporting role to a primary character.

Results

Number of female and male characters

A comparison was made between the number of female and male characters in the 15 episodes of Sesame Street. Descriptive statistics for the casting of each gender, and their portrayal in primary and secondary roles are reported in Table 1. A t-test was applied

Insert Table 1 About Here

to investigate the statistical significance of the number of characters of each gender shown in the episodes. These results are reported in Table 2. Clearly, there was a significantly greater number of male characters than female characters. The gender ratio was approximately 2:1

Insert Table 2 About Here

in favor of male characters. This was true for both primary and secondary roles as well as for the total number of roles.

A comparison was made using a chi-square test to determine if there was a differential occurrence of female and male characters portrayed in primary or secondary roles. The results of the test are reported in Table 3. These results indicate that there was a significantly

Insert Table 3 About Here

greater tendency to assign male characters to primary roles than to assign female characters to primary roles.

Portrayal of characters with stereotypical attributes

The frequency with which both female and male characters exhibited stereotypical attributes is shown in Table 4. Clearly, Sesame Street characters exhibit a preponderance

Insert Table 4 About Here

of gender stereotypical attributes. Female characters exhibited a total of 1,256 stereotypical attributes and only 731 non-stereotypical attributes. Male characters exhibited a total of 3,929 stereotypical attributes and only 228 non-stereotypical attributes. Across both genders the ratio of total number of stereotypical attributes to non-stereotypical attributes was more than 5 to 1.

Portrayal of characters in stereotypical roles

Table 5 reports the number of female and male characters presented in stereotypical and non-stereotypical roles. Overall the total number of characters portrayed in stereotypical roles compared to non-stereotypical roles was 10 to 1. After initial inspection it became apparent that the figures reported in Table 5 may be indicative of male characters

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Insert Table 5 About Here

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having a tendency to be portrayed in stereotypical roles more than female characters. A chi-square test was used to test this hypothesis. The results of this analysis are reported in Table 6. These results indicate that there is no significant difference between the frequency

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Insert Table 6 About Here

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of male assignment to stereotypical roles compared to female assignment to stereotypical roles.

Discussion

A study by Ann Beuf (Beuf, 1974) highlights the potential effect of media portrayed gender stereotypes. In a segment dealing with career aspirations, girls showed partiality for quieter roles such as nursing, while boys favored adventurous roles such as policeman and cowboy. Seventy percent of boys and seventy-three percent of girls in the study chose stereotypical careers for themselves. In response to the question: "What would you want to be when you grew up, if you were a girl/boy?" (p. 143), several girls replied the male gender career was their career of choice, but this could not be attained because of their female gender. One female child responded she would like to fly like a bird, yet she added "But I'll never do it, because I am not a boy" (p. 143). Through further examination it was discovered a television cartoon character had caused this girl to perceive flying as strictly a male ability. In addition, the study revealed girl subjects had given serious thought to what it would be like to be a boy, whereas boy subjects tended not to give thought to what it would be like to be a girl. These findings indicate children, in addition to knowing the sex differences between males and females at an early age, also perceive sex differences as imposing serious social limitations (Beuf, 1974).

In a study by Sternglanz and Serbin (1974), it was revealed females were more often portrayed in television as not having any direct power abilities. Females were often shown to possess supernatural abilities, and through the use of magic, a female could manipulate the situation and come to a solution. Unfortunately, she was unable to do this by virtue of her own abilities, it was only through the power of magic and the stereotype of "female manipulation" that she was able to solve the crisis of the moment. Conversely, males were being portrayed as using intellect and strength to resolve a particular situation.

A study examining the effects of gender-typed labeling of a task on the performance of children, reported children aged 11, 13, and 16 performed better at tasks labeled gender appropriate compared to tasks labeled as inappropriate. In addition, Davies (1990) found gender-typed labeling affected the child's choice of task. This may restrict a child's

independence to explore outside the realm that society has established in the area of gender-related tasks and accomplishments. In short, gender stereotypes continue to have a negative affect on all individuals, regardless of gender.

Often the role of the male gender is one which includes rough play, command of space, competition with peers and a certain toughness designed to show independence and masculinity (Eder & Parker, 1987; Lever, 1976; Willis, 1977). Conversely the female gender role suggests emotional supportiveness, nurturance, a concern for developing feminine allure and the like (Eder & Parker, 1987; Eisenhart & Holland, 1983; Gilligan, 1982; Lever 1976; Thorne, 1986; Valli, 1988). The mass-media, in addition to family members, teach what the male and female "role " in society should be and from there the child television viewer incorporates this information into a gender schema from which to retrieve gender pertinent knowledge. As the schema becomes more inclusive, the gender related information is categorized more efficiently and is therefore retained (Fiske & Taylor, 1984; Martin & Halverson, 1981).

When the self-concept is assimilated to the gender schema, children begin to adopt the standards of sex appropriateness they are exposed to (Fagot & Leinbach, 1989). Children must retain the knowledge that males and females are different before they can effectively incorporate gender schema into their lives. Most children do not show the ability to differentiate between boys and girls until they are over two years of age (Leinbach & Fagot, 1986). The age between two and three has been identified as the usual age in which gender stereotypes for toys, clothing, household objects, games, and occupations are acquired (Huston, 1983), though this awareness can begin as early as seventeen months (Money & Ehrhardt, 1973; Rabban, 1950; Leinbach and Fagot, 1989). It is children of this age who are first exposed to educational television programming.

Conclusion

Stereotyping is harmful because through the process of generalizing and labeling an individual, distinctive, personal qualities are ignored. Clearly this has the potential to harm individuals, however this is also harmful to society as a whole. For if we continue to stereotype individuals on the basis of gender, we stand to loose some of the unique beneficial contributions those individuals may possess. Stereotypic gender roles may place unnecessary restrictions on a child's ability to investigate and absorb what the world has to offer. Hence, this may restrict what a child can absorb from the world, and also restrict what a child can offer the world.

Preschool children are gender aware and continue to develop gender identity throughout their preschool years (Levy & Carter, 1989; Martin & Little, 1990). These children are known to be influenced by gender stereotypes displayed on television. The results of this study indicate gender stereotyping and under-representation of the female gender occurs significantly in the sample episodes of Sesame Street viewed during the research presented in this paper. The literature on gender stereotyping raises concerns regarding the effect of stereotyping. Furthermore, children are now exposed to more hours of television than ever before and consequently may be exposed to constant images of gender bias and stereotypes such as those described in this paper. The implications for education are clear. If we, as a society, are to create a gender bias free environment then we need to address all areas of gender misrepresentation. Influential television programming directed towards our children seems an important place to start.

The concerns expressed in this paper reach far beyond the effects of a single television program. Children watch television programming over and above what has been designed especially for them (Singer & Singer, 1981). This exposes children to a wide-range of stereotypical role portrayals. If Sesame Street is among the best of currently available educational television programs for children, as is indicated by the widespread recognition this program receives, then serious questions arise concerning the equality of other television.

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Table 1

The number of female and male characters cast in primary and secondary roles

	Female			Male		
Role	Total over all episodes	Mean per segment	SD per segment	Total over all episodes	Mean per segment	SD per segment
Primary	314	0.77	1.10	623	1.54	1.10
Secondary	102	0.25	0.75	177	0.44	0.96
Total	416	1.00	1.31	800	1.96	1.38

Table 2

Results of a t-test comparing the casting of characters

Comparison	t-value	df	Significance
Total female and total male	11.88	406	.001
Primary female and primary male	10.49	404	.001
Secondary female and secondary male	4.03	404	.001
Primary female and secondary female	7.98	405	.001
Primary male and secondary male	14.60	404	.001

Table 3

Results of a chi-square test comparing the casting of female and male characters in primary or secondary roles.

Comparison	Chi square value	df	Significance
Number of female and male characters in primary and secondary roles	30.46	1	.001

Table 4

Number of female and male stereotypical and non-stereotypical attributes observed

Attributes	Stereotypical			Non-Stereotypical		
	Total over all episodes	Mean per segment	SD per segment	Total over all episodes	Mean per segment	SD per segment
Female	1,256	3.09	1.65	731	1.80	1.48
Male	3,929	4.87	1.45	228	0.28	0.61
Total	5,179	-	-	959	-	-

Table 5

Number of female and male characters portrayed in stereotypical roles.

Attributes	Stereotypical	Non-Stereotypical
Female	355	44
Male	731	67
Total	1,086	111

Table 6

Results of a chi-square test comparing the casting of female and male characters in stereotypical or non-stereotypical roles.

Comparison	Chi square value	df	Significance
Number of female and male characters in stereotypical and non-stereotypical roles	2.74	1	.434